SUBJECT AREA 14: CALIBER .50 M2 MACHINE GUN

071-022-0001

Maintain a Caliber .50 M2 Machine Gun

Conditions: Given a caliber .50 M2 HB machine gun, M3 tripod, MK64 gun cradle mount, pintle, traversing and elevating (T&E) mechanism, linked caliber .50 ammunition, headspace and timing gauge, cleaner lubricant and preservative (CLP), rifle bore cleaner (RBC), lubricating oil semifluid (LSA), carbon removing compound, bore brush, wiping rags, M4 cleaning rod, small-arms (2-inch) cleaning swabs, and a wooden block.

Standards: Cleaned and lubricated the caliber .50 M2 machine gun and its components. Cleaned and inspected all parts and ammunition and turned in unserviceable parts for maintenance. Assembled the gun so it was operational.

Performance Steps

1. Clear the caliber .50 machine gun.

a. Unlock the bolt latch release and raise the cover (figure 071-022-0001-1).

b. Pull and lock the bolt to the rear, leaving the retracting slide handle to the rear.

c. Inspect the chamber and T-slot to make sure they hold no rounds.

d. Place a wooden block inside the receiver, between the bolt and the rear of the barrel.

e. Insert the cleaning rod in the muzzle end of the barrel until you can see the rod in the receiver. Remove the cleaning rod.

f. Grasp the retracting slide handle, press the bolt latch release, and ease the bolt forward. Close the cover.

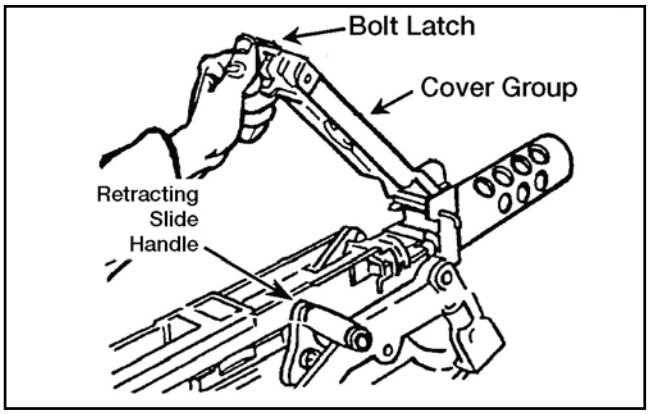

Figure 071-022-0001-1. Raising the cover

2. Disassemble the machine gun.

a. Remove the barrel assembly.

(1) Raise the cover group (figure 071-022-0001-1).

(2) Grasp the retracting slide handle with the right hand, palm up. Pull the bolt to the rear until the barrel locking spring lug aligns with the 3/8-inch hole in the right side plate of the receiver (figure 071-022-0001-2).

(3) Place the smallest loop of a caliber .50 link between the trunnion block and the barrel extension (figure 071-022-0001-2). This keeps the barrel locking spring lug aligned with the 3/8-inch hole.

(4) Unscrew the barrel from the receiver. Be careful not to damage the threads or barrel locking notches.

(5) Remove the caliber .50 link to allow the bolt to go forward slowly. Make sure the bolt group does not slam forward with the barrel removed.

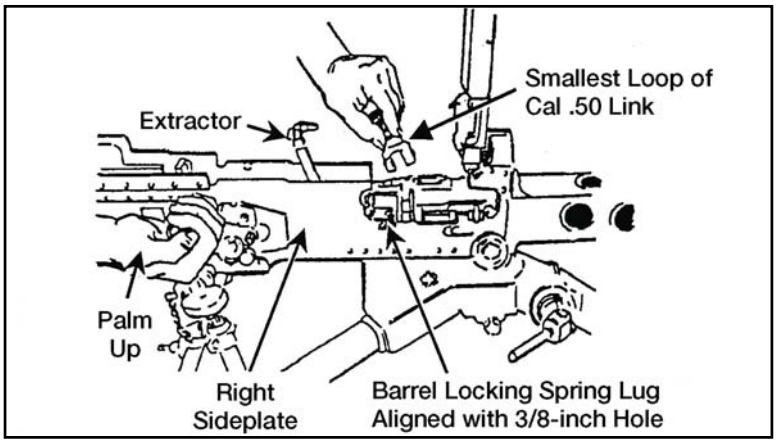

Figure 071-022-0001-2. Alignment of the lug

b. Remove the backplate assembly.

WARNING

Do not remove the backplate unless the bolt is in the forward position. When removing the backplate, stand to one side of the weapon to avoid possible injury from the driving spring rod.

(1) Ensure that the bolt is forward and the bolt latch release is unlocked (in the single shot mode) (figure 071-022-0001-3).

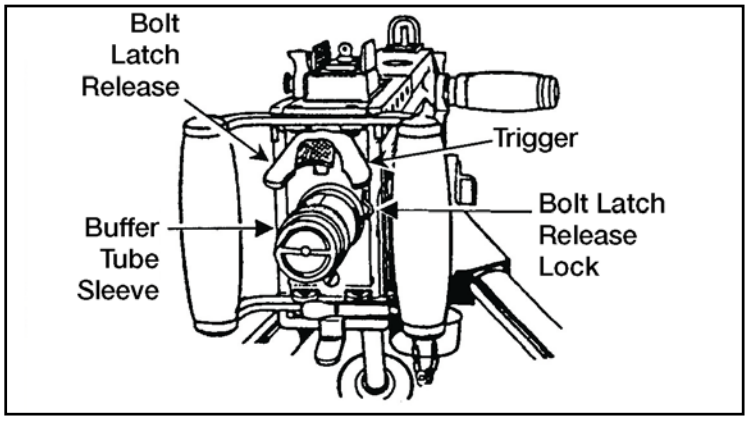

Figure 071-022-0001-3. Releasing the bolt latch

(2) Pull the backplate latch lock straight back while lifting up on the backplate latch (figure 071-022-0001-4).

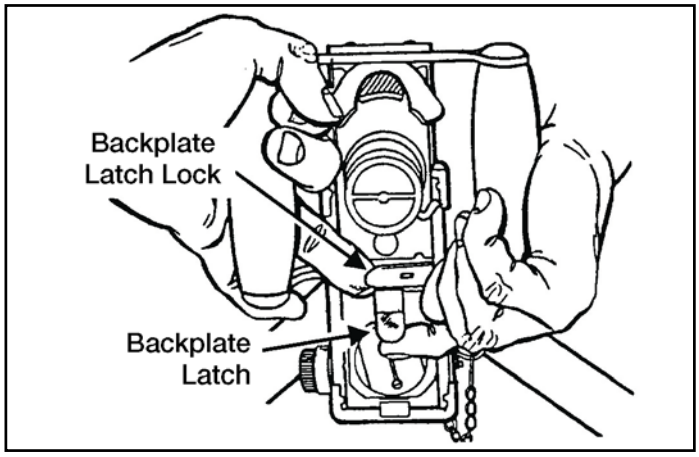

Figure 071-022-0001-4. Removal of the backplate

(3) Remove the backplate assembly by lifting straight up.

c. Remove the driving spring rod assembly (figure 071-022-0001-5).

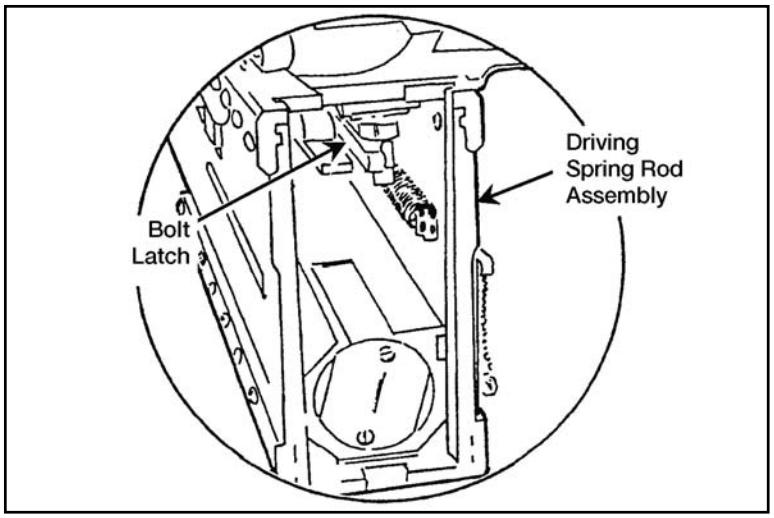

Figure 071-022-0001-5. Removal of the driving spring rod assembly

(1) Push the rear of the driving rod assembly forward and to the left to free it from the side of the receiver.

WARNING

Never try to charge the machine gun while the backplate is off and the driving spring rod assembly is in place. If the backplate is off and the driving spring assembly is compressed, the retaining pin on the driving spring can slip from its seat in the side plate. This could cause serious injury to anyone behind the machine gun.

(2) Pull the driving spring rod assembly to the rear and out of the receiver.

d. Remove the bolt assembly.

(1) Retract the bolt assembly far enough to the rear to align the bolt stud with the bolt stud hole in the right side plate of the receiver (figure 071-022-0001-6).

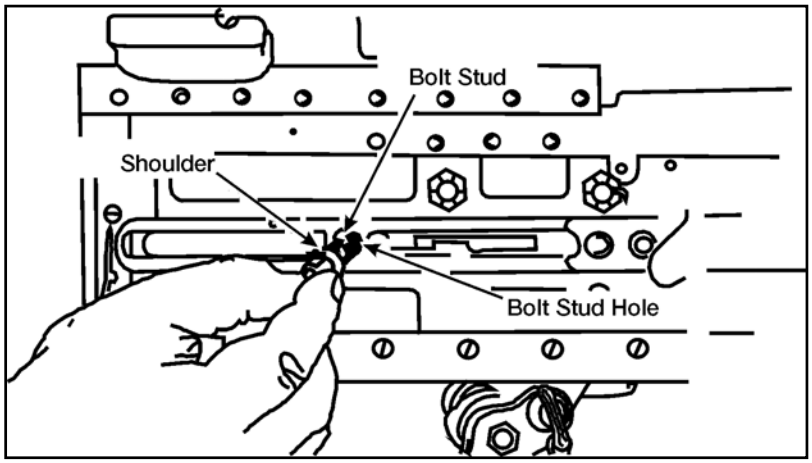

Figure 071-022-0001-6. Removal of the bolt stud

(2) If you accidentally move the bolt all the way to the rear, the bolt latch will engage in the bolt latch notches in the top of the bolt. If this occurs, raise the bolt latch and push the bolt forward to align the bolt stud with the clearance hole (figure 071-022-0001-7).

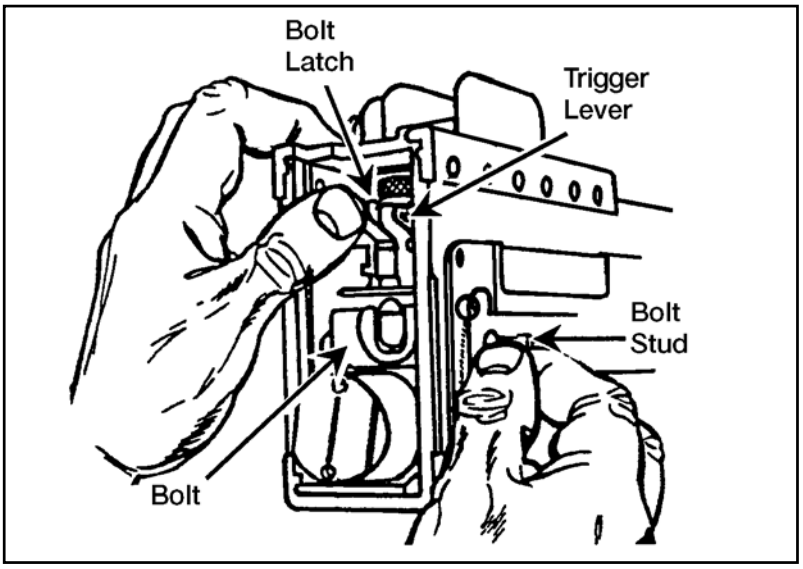

Figure 071-022-0001-7. Unlatching the bolt

(3) Remove the bolt stud.

(4) Remove the bolt assembly by pulling it from the rear of the receiver (figure 071-022-0001-8).

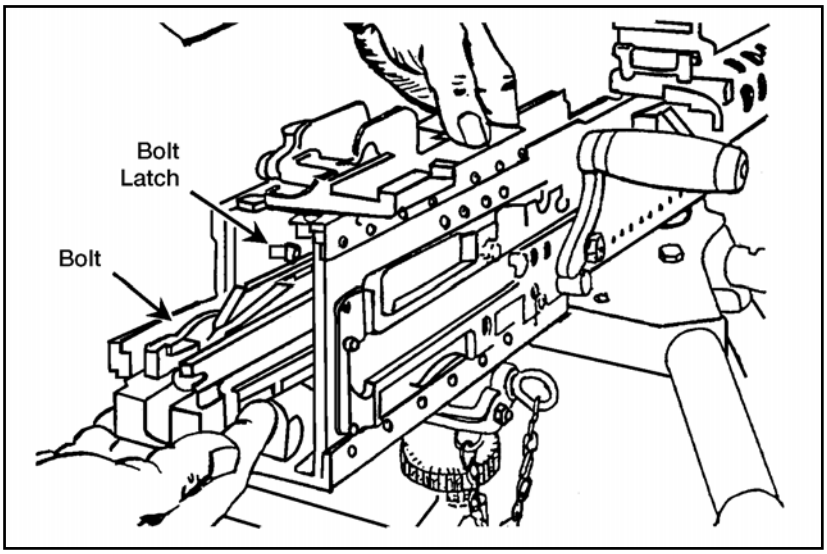

Figure 071-022-0001-8. Removal of the bolt from the receiver

(5) Disassemble the bolt.

(a) Rotate the cartridge extractor upward and remove it from the left side of the bolt (figure 071-022-0001-9).

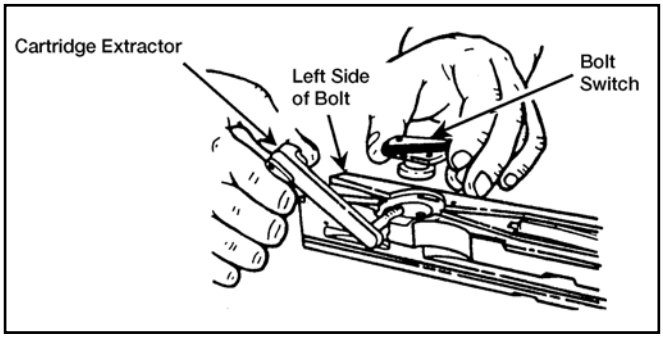

Figure 071-022-0001-9. Removal of the cartridge extractor and bolt

(b) Remove the bolt switch by lifting it straight up.

Performance Steps

(c) Place the cocking lever in its rearmost position. Press down on the sear with a swab holder and release the firing pin spring (figure 071-022-0001-10).

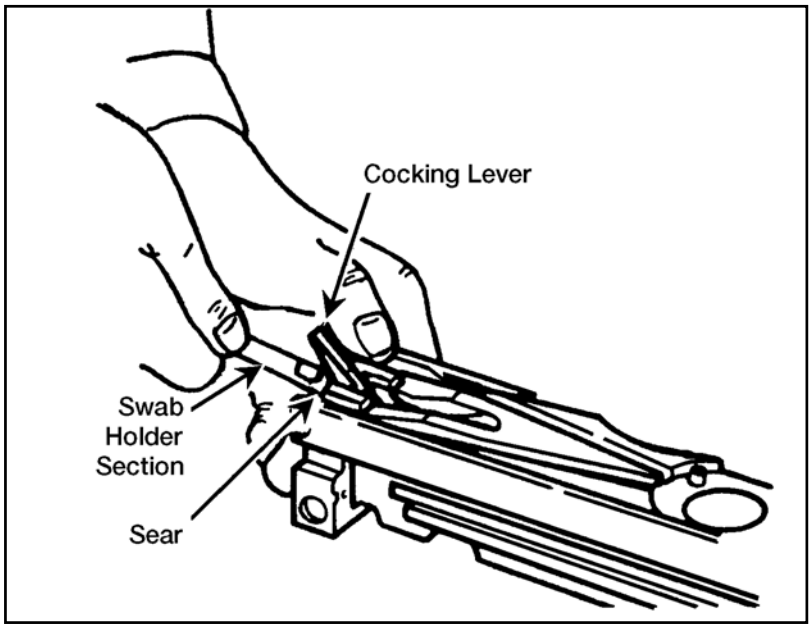

Figure 071-022-0001-10. Releasing the firing pin spring

(d) Insert a swab holder section in the hole at the rear of the bolt and push out the cocking lever pin and the cocking lever (figure 071-022-0001-11).

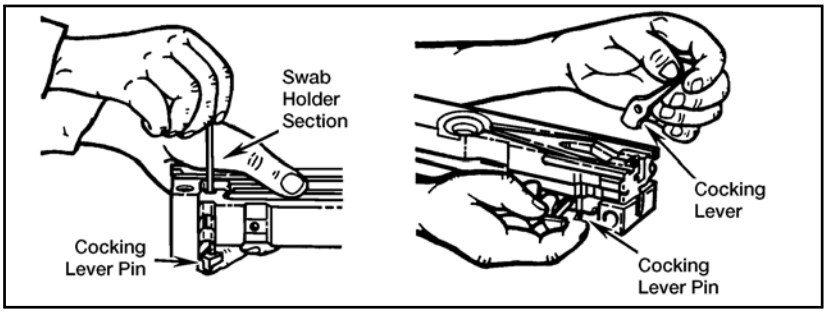

Figure 071-022-0001-11. Removal of the cocking lever pin and cocking lever

(e) Use the thin end of the cocking lever to rotate the accelerator stop lock to the center of the bolt, then pry up the accelerator stop lock and remove it (figure 071-022-0001-12).

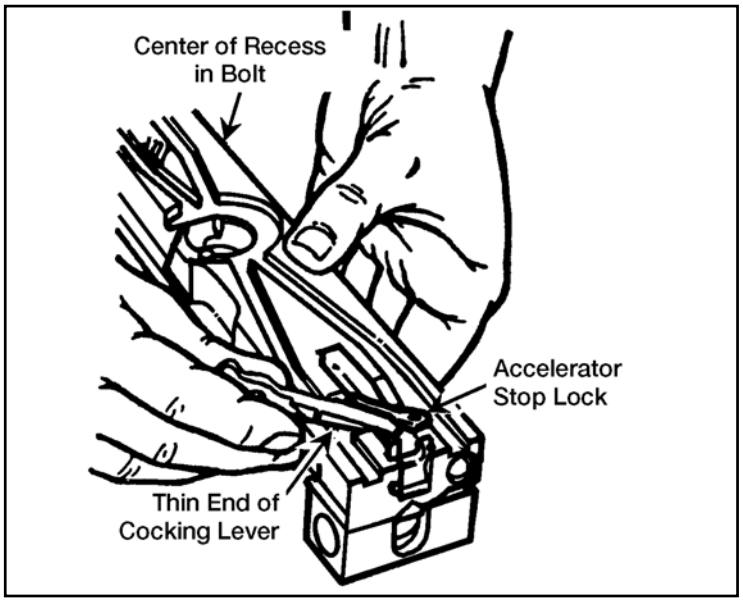

Figure 071-022-0001-12. Removal of the accelerator stop lock

Performance Steps

(f) Using the thin end of the cocking lever, press the accelerator stop from the bolt, turn the bolt over, and pry the accelerator stop from bottom of bolt (figure 071-022-0001-13).

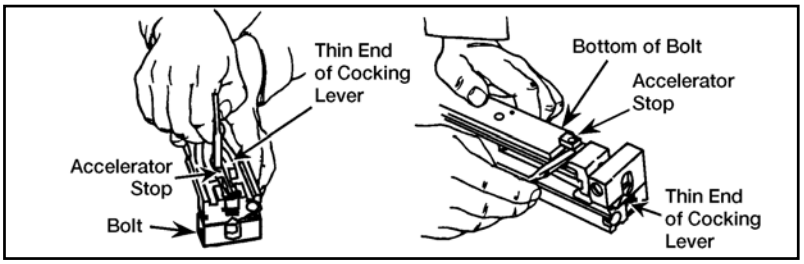

Figure 071-022-0001-13. Removal of the accelerator stop

(g) Depress the sear and remove the sear slide, sear, and sear spring (figure 071-022-0001-14).

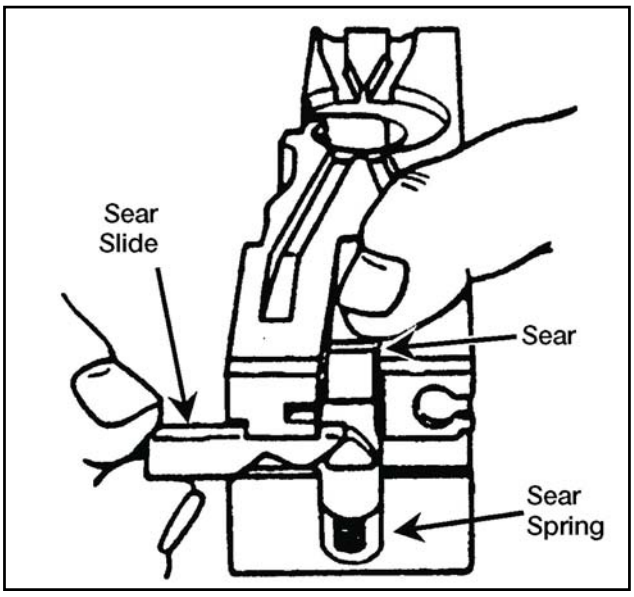

Figure 071-022-0001-14. Removal of the sear slide, sear, and sear spring

(h) Tip the front end of the bolt upward and remove the firing pin extension assembly (figure 071-022-0001-15).

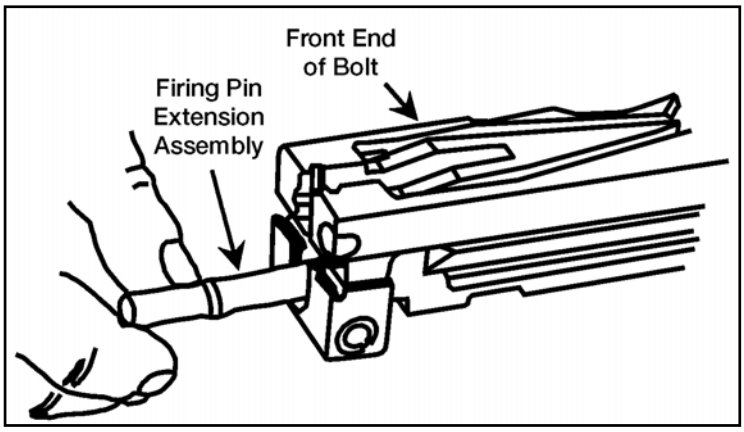

Figure 071-022-0001-15. Removal of the firing pin extension assembly

(i) Remove the firing pin from the firing pin extension assembly.

e. Remove the barrel buffer and barrel extension assemblies (figure 071-022-0001-16).

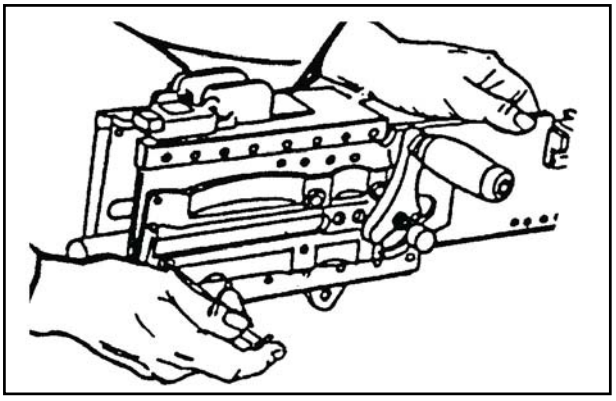

Figure 071-022-0001-16. Removal of the barrel buffer group and barrel extension group

Performance Steps

(1) Insert a pointed instrument (you can use the pointed end of the M4 cleaning rod) in the hole at the lower rear corner of the right side plate. Depress the buffer body lock and, at the same time, place one hand inside the receiver and push the barrel extension and buffer assemblies to the rear until the buffer accelerator is near the rear of the receiver body.

WARNING

Maintain thumb pressure on the buffer accelerator while removing the barrel buffer and barrel extension assemblies.

(2) Maintain pressure on the buffer accelerator with your thumb and remove the barrel buffer and barrel extension assemblies from the receiver. Separate them by pushing forward on the accelerator tips (figure 071-022-0001-17).

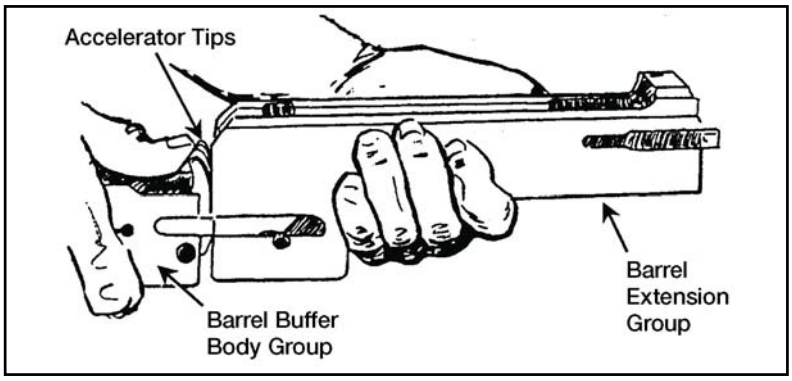

Figure 071-022-0001-17. Separation of the barrel buffer and barrel extension assemblies.

(3) Disassemble the barrel buffer assembly.

(a) Remove the buffer assembly by pushing it out the rear of the body of the barrel buffer (figure 071-022-0001-18).

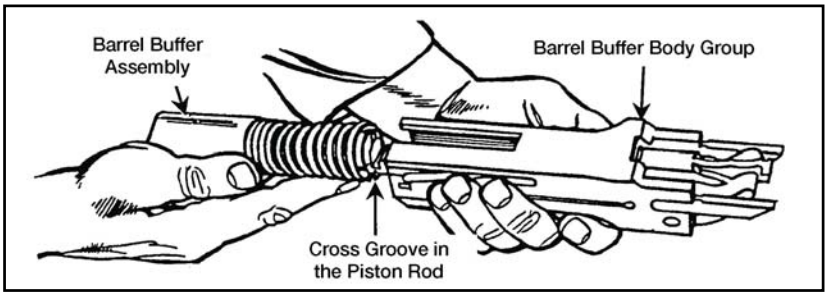

Figure 071-022-0001-18. Removal of the barrel buffer assembly

(b) Using a swab holder, drive the accelerator pin assembly from the barrel buffer body group.

(c) Remove the buffer accelerator.

(4) Disassemble barrel extension assembly.

(a) Using the pointed end of the M4 cleaning rod, remove breech lock pin assembly (figure 071-022-0001-19).

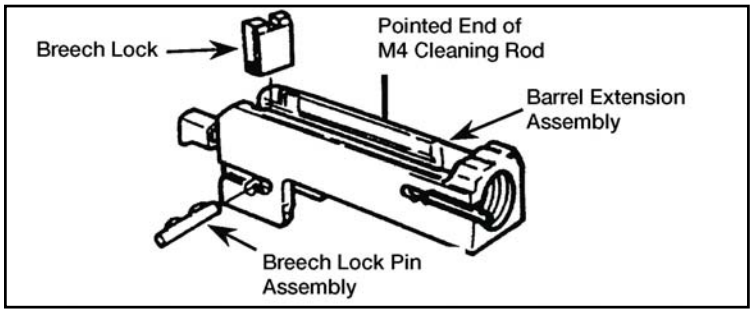

Figure 071-022-0001-19. Removal of the breech lock pin assembly and breech lock

(b) Remove breech lock.

f. Disassemble receiver assembly.

(1) Remove the front cartridge stop and rear cartridge stop assembly (figure 071-022-0001-20).

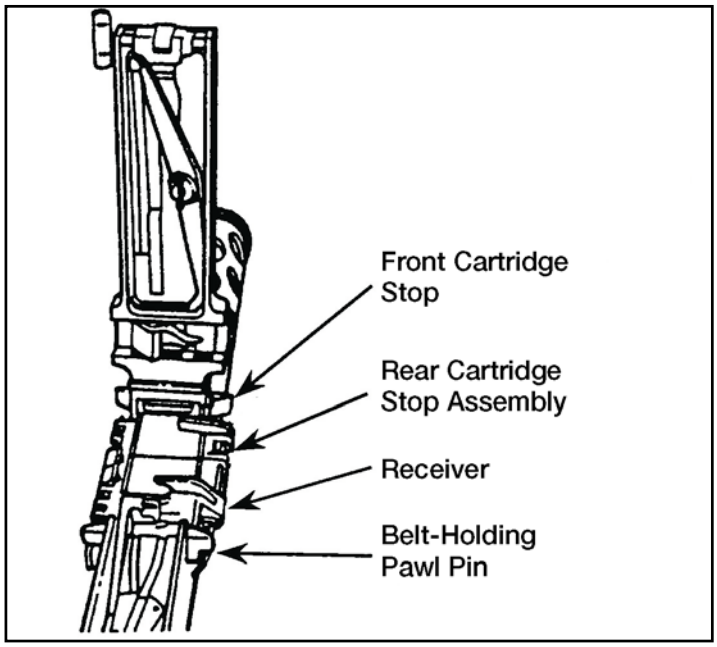

Figure 071-022-0001-20. Removal of the cartridge stop assemblies

(2) Press down on belt holding pawl assembly to prevent loss of springs, and remove the belt holding pawl pin. Remove belt holding pawl assembly and springs (figure 071-022-0001-21).

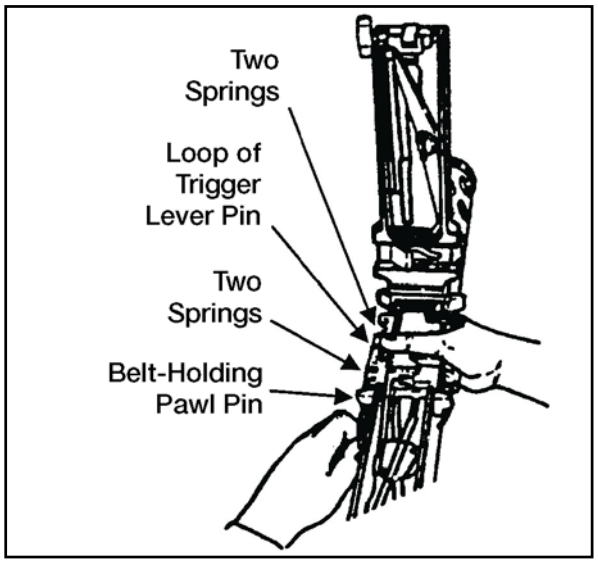

Figure 071-022-0001-21. Removal of the belt holding pawl pin, assembly, and springs

(3) Raise the loop of the trigger lever pin and rotate it into a vertical position. Reach inside the receiver, grasp the trigger lever, and remove the trigger pin assembly and trigger lever (figure 071-022-0001-22).

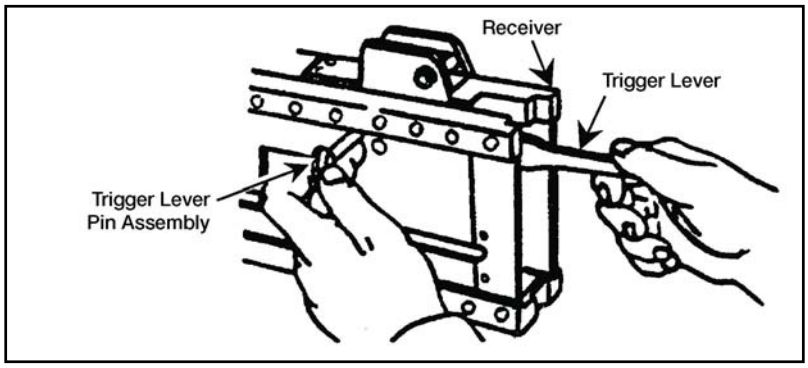

Figure 071-022-0001-22. Removal of the trigger lever pin assembly and trigger lever

3. Clean the .50 caliber machine gun and components.

a. Barrel assembly.

(1) Clean the bore. Screw the bore brush into the cleaning rod, dip the bore brush in RBC, and push the cleaning rod through the chamber end of barrel. Unscrew the bore brush from the cleaning rod. Repeat the process until clean.

(2) Clean the chamber. Screw the chamber brush into the cleaning rod, dip the chamber brush in RBC, and clean the chamber using a clockwise twisting motion.

(3) Insert a cleaning swab in the cleaning rod and swab out the bore from the chamber end and back. Repeat until a swab comes out clean.

(4) Wipe outside surfaces of barrel with carbon removing compound.

(5) Remove all traces of RBC before lubricating.

Note. Do not submerge the backplate assembly in any fluid.

b. Backplate assembly. Use only clean wiping rags to remove foreign matter from backplate.

c. Bolt assembly. Clean all parts of bolt assembly with a cleaning swab saturated with carbon removing compound. Clean the face of the bolt with a cleaning swab soaked in RBC.

Performance Steps

d. Clean barrel buffer assembly, barrel extension assembly, and receiver assembly with a cleaning swab saturated with carbon removing compound. Wipe all parts dry with clean wiping rags.

e. Clean components.

(1) T&E mechanism. Remove foreign matter with a clean dry wiping rag. Use a small arms cleaning brush to clean numbers on the scale.

(2) Clean M3 tripod, MK64 gun cradle mount, and pintle with a cleaning swab saturated with carbon removing compound. Wipe all parts dry with clean wiping rags.

f. Ammunition. Remove foreign matter with a clean dry wiping rag.

4. Inspect for serviceability.

a. Barrel assembly.

(1) Check barrel locking notches for wear.

(2) Check the bore for bulges, missing bands, and large pits.

b. Backplate assembly.

(1) Check guides for burrs and bends.

(2) Check backplate latch and backplate lock for proper functioning.

(3) Make sure locking pins are in place.

(4) Check trigger and bolt latch release for proper functioning.

(5) Make sure handle grips do not move freely and are not cracked.

c. Driving rod assembly.

(1) Check for flat spots on springs.

(2) Make sure springs operate freely and rod and pin are not bent.

d. Bolt assembly.

(1) Check movement of cartridge extractor in bolt; it should raise and lower without binding. Check movement of cartridge ejector.

(2) Check bolt switch, cocking lever pin, cocking lever, accelerator stop lock, accelerator stop, and sear slide for cracks, bends, and burrs.

(3) Inspect sear for cracks and burrs. Inspect sear notch for wear, chips, and burrs. Inspect sear spring for breaks and lack of tension.

(4) Inspect firing pin for cracks and chipped or sharp tip. Tip should be smooth and well rounded.

Performance Steps

(5) Check firing pin extension for cracks, burrs, and free movement in bolt.

(6) Make sure bolt is free of burrs and cracks and firing pin hole is not visually out of round.

e. Barrel buffer assembly.

(1) Inspect buffer body lock for tension, staking, and retention in barrel buffer body.

(2) Inspect buffer accelerator for broken claws or chipped tips.

(3) Inspect accelerator pin assembly for broken or missing spring.

(4) Inspect buffer spring for cracks or breaks.

(5) Inspect breech lock depressors. They must have slight vertical (up and down) movement but should have no lateral (side to side) movement.

f. Barrel extension assembly.

(1) Make sure barrel extension assembly is not bent and the bolt guideways are smooth and free of burrs.

(2) Inspect threads of barrel extension assembly for damage.

(3) Make sure barrel locking spring is staked and fully seated in its groove. Also, make sure the locking end of the spring has good tension and the lug is not damaged.

(4) Check breechblock for smooth movement in guideways of barrel extension assembly.

g. Receiver and cover assembly.

(1) Inspect belt holding pawl brackets for looseness, bends, and cracks.

(2) Inspect side plates for bends that would affect movement of any internal parts.

(3) Check for cracks and burrs at backplate grooves.

(4) Check operation of rear sight. Make sure windage and elevation screws function properly, leaf assembly has good spring tension, and sight assembly is secured tightly to receiver.

(5) Make sure bolt stop is present and in good condition.

(6) Make sure trigger lever moves freely.

(7) Make sure trigger lever pin locks in place.

(8) Make sure cotter pin is in place on extractor switch.

Performance Steps

(9) Check retracting slide assembly for visible damage. Check retracting slide handles for smooth movement. Make sure cotter pins are present and in good condition, and safety wire is in place and properly laced.

h. Inspect components.

(1) T&E mechanism.

(a) Inspect hand wheels and threads for burrs and rust. Check hand wheels for smooth operation.

(b) Make sure traversing slide lock lever has spring action. Make sure elevating mechanism sleeve fits on traversing bar and clamps firmly.

(c) Check traversing and elevating scales for legibility.

(d) Inspect quick release pin and chain for burrs and rust. Check quick release pin for presence of spring loaded balls.

(2) M3 tripod.

(a) Check for completeness of tripod. Make sure all nuts and bolts are tightly secured.

(b) Check for visible cracks on legs and tripod head.

(c) Check for missing, broken, or inoperative sleeve lock latch.

(d) Check pintle lock assembly. Check surfaces of pintle, bolt, and nut for burrs and rust. Make sure cotter pin is present and in good condition.

(e) Check locking action of front leg clamping assembly.

(f) Check that rear legs lock in the open position. Make sure sleeve latch notch and right leg slide notch engage completely. Make sure latch spring has good tension.

(g) Check telescoping, indexing, and locking action of rear legs and front leg clamping assembly.

(3) MK64 gun cradle mount.

(a) Check for missing or damaged parts.

(b) Check for rust, cracks, and burrs.

(c) Check pintle lock assembly. Check surfaces of pintle, bolt, and nut for burrs and rust. Make sure cotter pin is present and in good condition.

i. Inspect ammunition. Check for damage or corroded rounds.

5. Lubricate the .50 caliber machine gun.

Performance Steps

a. Remove all traces of RBC or carbon removing compound.

CAUTION
Do not mix lubricants on the same weapon. The weapon must be thoroughly cleaned with dry cleaning solvent during change from one lubricant to another.

b. Lubricate exterior of backplate with a light coat of oil. Do not lubricate interior of backplate.

c. Lubricate all other parts with a light coat of LSA or CLP (at temperatures above 0 degrees Fahrenheit) or LAW (at temperatures below 0 degrees Fahrenheit).

6. Assemble the .50 caliber machine gun.

a. Assemble the trigger lever (Figure 071-022-0001-23).

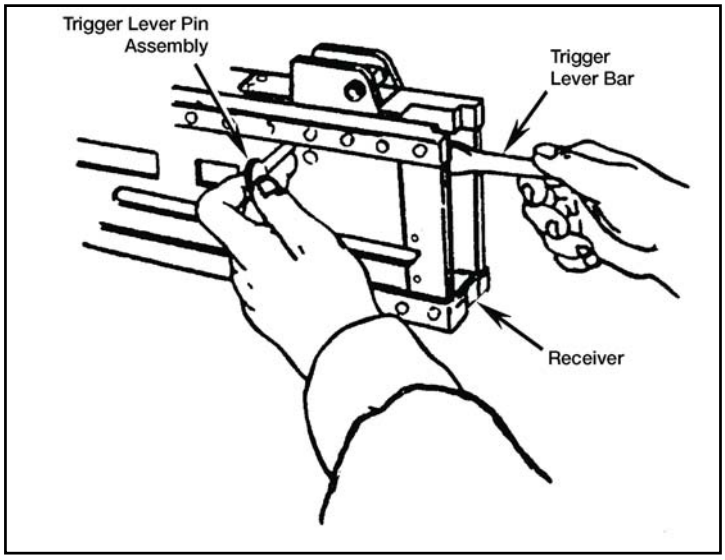

Figure 071-022-0001-23. Assembly of the trigger lever

(1) Place the trigger lever bar in the receiver directly under the timing nut so the hole in the trigger lever bar is aligned with the mounting hole in the receiver.

(2) Insert trigger lever pin assembly (loop end vertical) in the assembly hole on left side of receiver. Match key on trigger lever pin with keyway in side plate of receiver and install the pin completely.

(3) Rotate trigger pin lever assembly 90 degrees and lock in place. Fold the loop end down.

b. Assemble receiver group.

(1) Determine the direction of feed. Figure 071-022-0001-24 shows left-hand feed. Place the right-hand rear cartridge stop assembly and front cartridge stop on the belt holding pawl bracket.

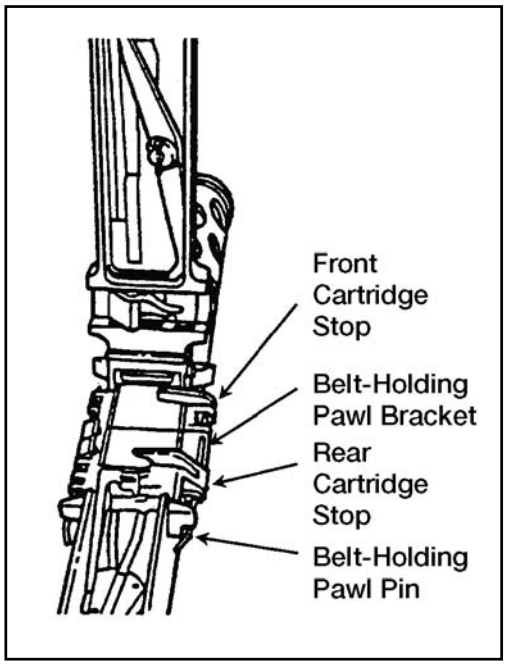

Figure 071-022-0001-24. Installation of the rear cartridge stop assembly and front cartridge stop

(2) Install belt holding pawl pin with hooked end to rear.

(3) Seat belt holding pawl springs in place on the belt holding pawl bracket.

(4) Place belt holding pawl assembly on the springs. Compress springs and insert belt holding pawl pin (figure 071-022-0001-25).

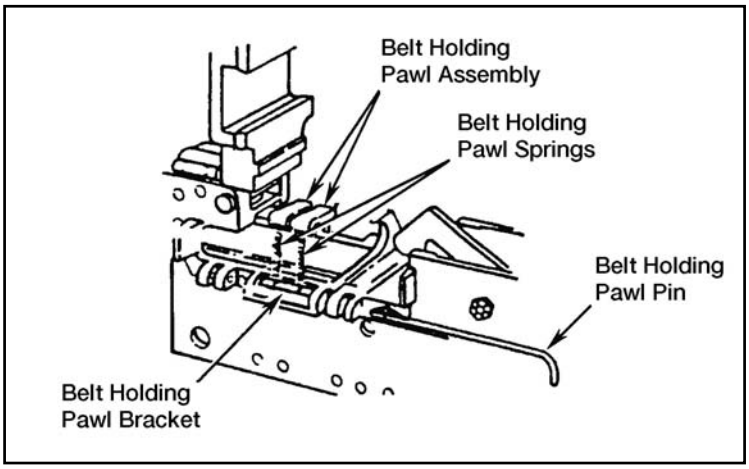

Figure 071-022-0001-25. Installation of the belt holding pawl assembly

c. Assemble barrel extension (figure 071-022-0001-26).

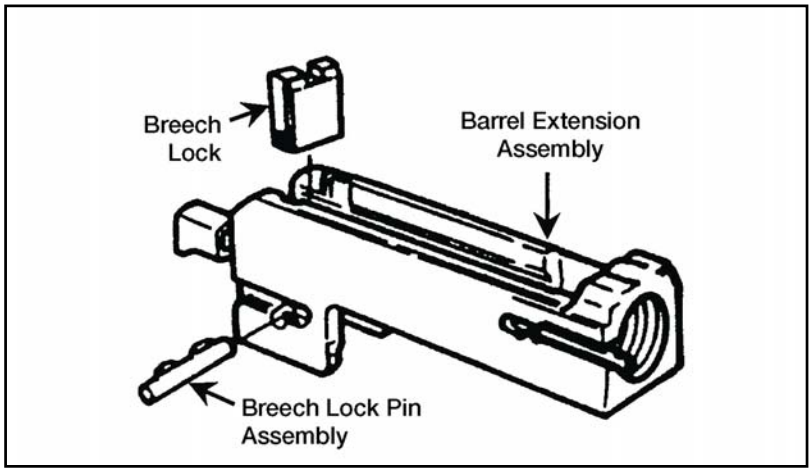

Figure 071-022-0001-26. Assembly of the barrel extension assembly

(1) Install breechblock lock with beveled edge up and to the front of barrel extension assembly.

Performance Steps

(2) Install breech lock pin assembly in barrel extension. Make sure both ends of breech lock pin assembly are flush with sides of barrel extension assembly.

d. Assemble barrel buffer assembly.

(1) Place buffer accelerator (tips up) into barrel buffer body, align mounting holes, and install buffer pin assembly. Ensure both ends of barrel buffer pin assembly are flush with sides of barrel buffer body (figure 071-022-0001-27).

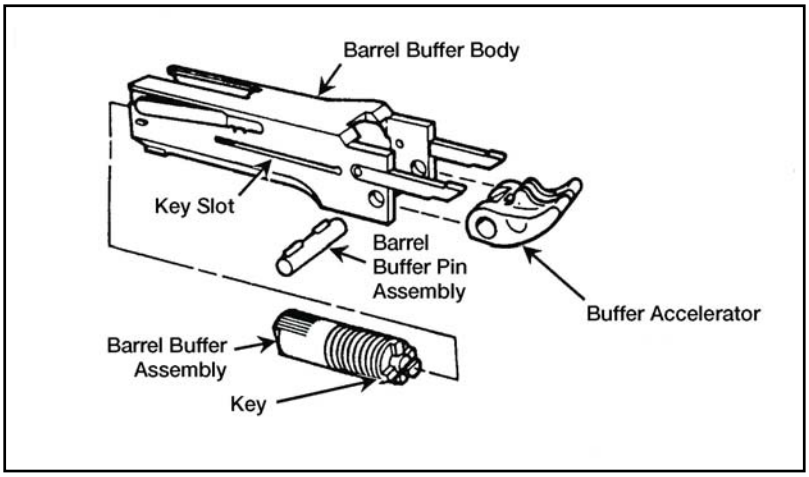

Figure 071-022-0001-27. Assembly of the barrel buffer assembly

(2) Align key on barrel buffer assembly with key slot in barrel buffer body and slide barrel buffer assembly into barrel buffer body.

(3) Hold the barrel buffer assembly with the buffer accelerator up and engage the notch on the shank of the barrel extension assembly with the cross groove in the piston rod of the barrel assembly (figure 071-022-0001-28).

Performance Steps

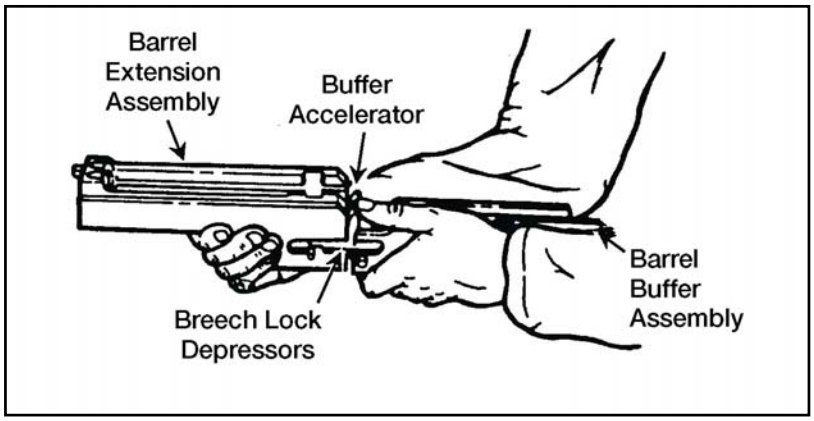

Figure 071-022-0001-28. Attachment of the barrel buffer and barrel extension assemblies

(4) Align breech lock depressors in grooves of barrel extension assembly and push barrel buffer assembly forward.

(5) Install barrel buffer assembly and barrel extension assembly in receiver (figure 071-022-0001-29).

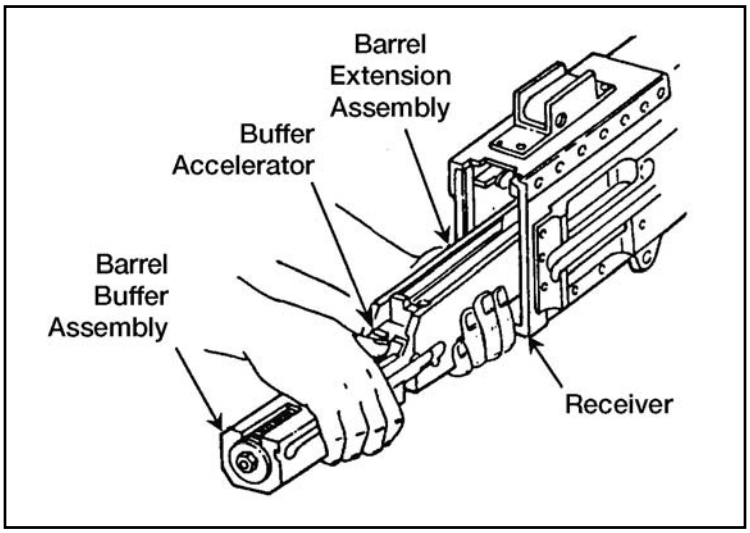

Figure 071-022-0001-29. Installation of the barrel buffer and barrel extension assemblies

e. Assemble bolt assembly.

(1) Attach firing pin to firing pin extension assembly (figure 071-022-0001-30).

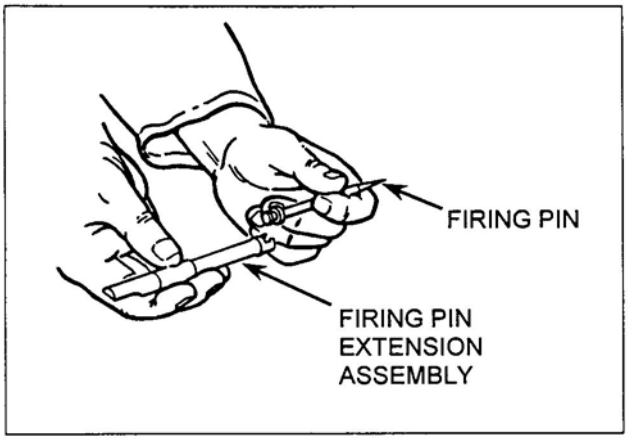

Figure 071-022-0001-30. Attachment of the firing pin to the firing pin extension assembly

(2) Insert firing pin extension assembly into bolt with notch of firing pin extension assembly down (Figure 071-022-0001-31).

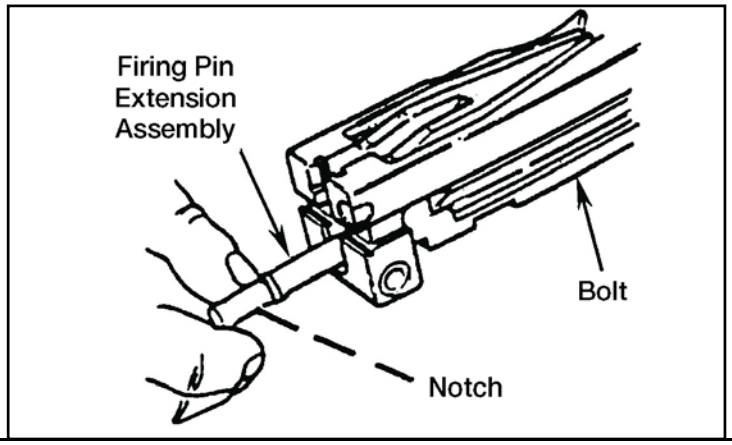

Figure 071-022-0001-31. Installation of the firing pin extension assembly

(3) Slide firing pin extension assembly forward so tip of firing pin protrudes from face of bolt.

Performance Steps

(4) Place sear spring in recess on bolt. Slide sear down into vertical grooves at rear of bolt with wedge-shaped lug pointed outward and upward (figure 071-022-0001-32).

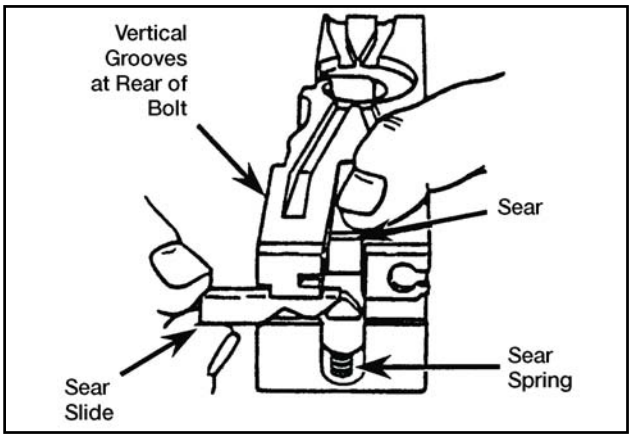

Figure 071-022-0001-32. Installation of the sear side

(5) Compress sear spring by pressing down on the sear. Install sear slide from left side of bolt in grooves of bolt with "V" notch down.

Note. Make sure the pin end of the accelerator is installed behind the firing pin spring, not through a coil.

(6) Insert pin end of accelerator stop through bottom of bolt (figure 071-022-0001-33).

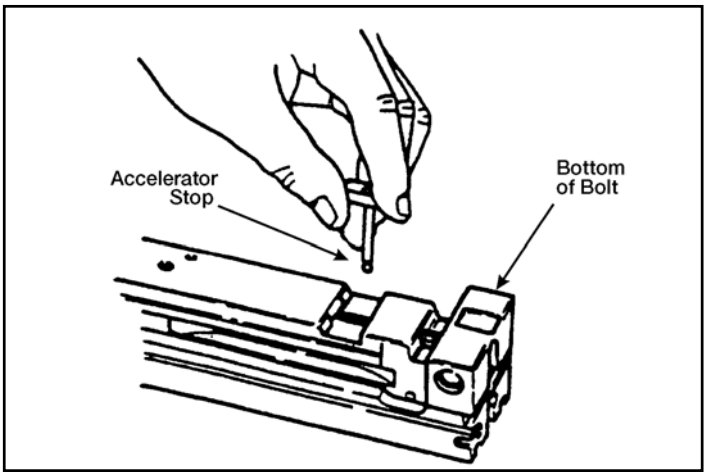

Figure 071-022-0001-33. Attachment of the accelerator stop

Note. Base end of accelerator stop should be installed with long end forward so beveled edges match.

(7) Turn bolt over. Place forked end of accelerator stop lock on notched end of accelerator stop.

(8) Using the wedge-shaped end of the cocking lever, press down on the flat end of the accelerator stop lock, and move the cocking lever into the groove on the left side of the bolt (figure 071-022-0001-34).

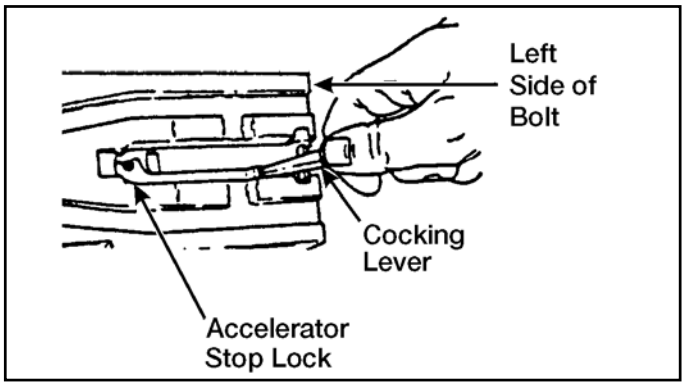

Figure 071-022-0001-34. Attachment of the accelerator stop lock

(9) Insert cocking lever, with rounded nose on lower end of lever to rear, into slot in top of bolt (figure 071-022-0001-35).

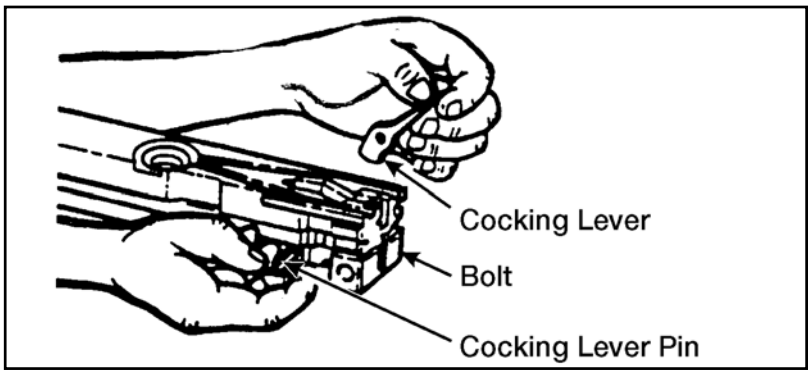

Figure 071-022-0001-35. Attachment of the cocking lever

(10) Align the hole in the cocking lever with the holes in the bolt. Insert the cocking lever pin from the left side.

(11) Push the cocking lever forward to charge the firing pin. Return the cocking lever to the rearward position.

WARNING

Do not try to release the firing pin with the cocking lever forward. The cocking lever could spring back forcibly and cause serious injury.

(12) Test firing pin release. Trip the firing pin by depressing the top of the sear with a section of a swab-holder. If doing so makes a sharp metallic sound, the firing pin spring is in good condition (figure 071-022-0001-36).

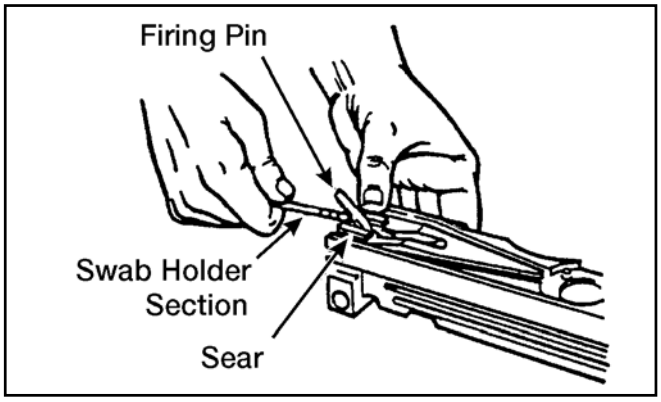

Figure 071-022-0001-36. Testing the firing pin release

(13) Place cocking lever in forward position. Determine the direction of feed before installing the bolt switch.

(14) Place bolt switch in position so the feed groove is continuous for feed direction indicated (figure 071-022-0001-37).

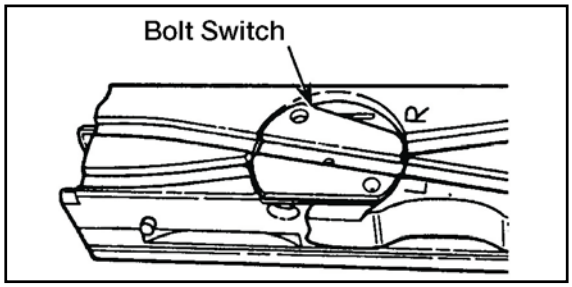

Figure 071-022-0001-37. Setting the bolt switch

Performance Steps

(15) Hold cartridge extractor in vertical position and insert shank end of cartridge extractor into left side of bolt. Make sure cartridge extractor fits into bolt as far as possible.

(16) Rotate cartridge extractor downward to full horizontal position. Check that flange on bottom of cartridge extractor has engaged shoulder on bolt.

(17) Ensure cocking lever is forward.

(18) Push bolt assembly forward into receiver until bolt latch engages notches in top of bolt assembly (figure 071-022-0001-38).

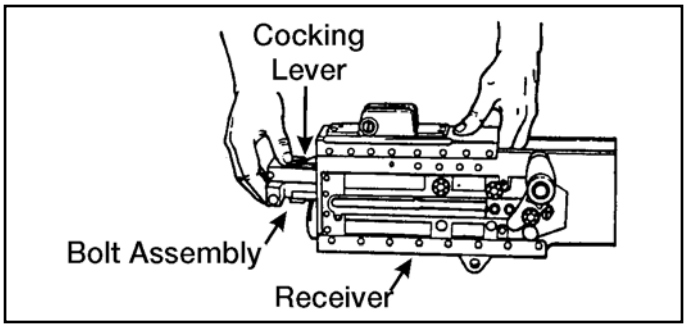

Figure 071-022-0001-38. Installation of the bolt assembly

(19) If you cannot install the bolt this way, remove the barrel extension and buffer assembly from the receiver. Install the bolt assembly into the barrel extension and buffer assembly, then install them in the receiver (figure 071-022-0001-39).

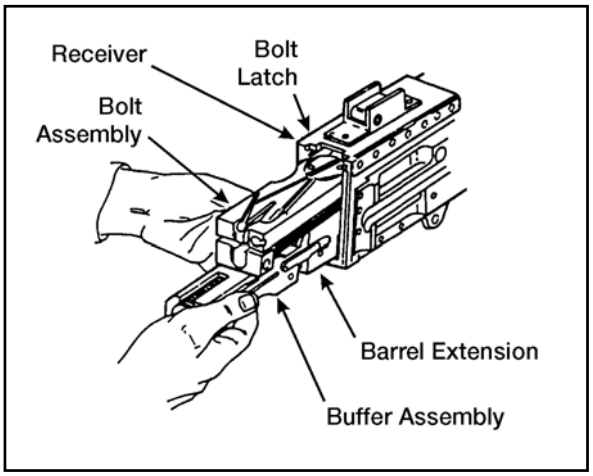

Figure 071-022-0001-39. Installation of the bolt assembly within the barrel extension and buffer assembly

(20) Raise bolt latch and push bolt assembly into the receiver.

(21) Align holes in bolt assembly with stud assembly hole in receiver and install bolt stud in hole in bolt assembly. Place bolt in forward position (figure 071-022-0001-40).

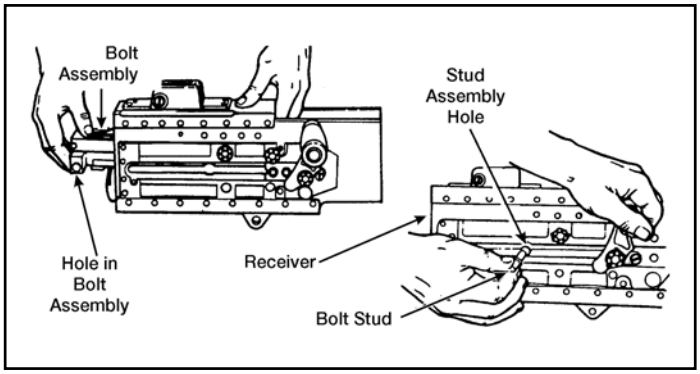

Figure 071-022-0001-40. Installation of the bolt assembly

Performance Steps

f. Assemble driving spring rod assembly (figure 071-022-0001-41). Install the driving spring rod assembly in the upper right corner of the bolt. Push forward and to the right until the driving spring rod assembly engages in the hole in the side plate of the receiver—not in the groove for the backplate.

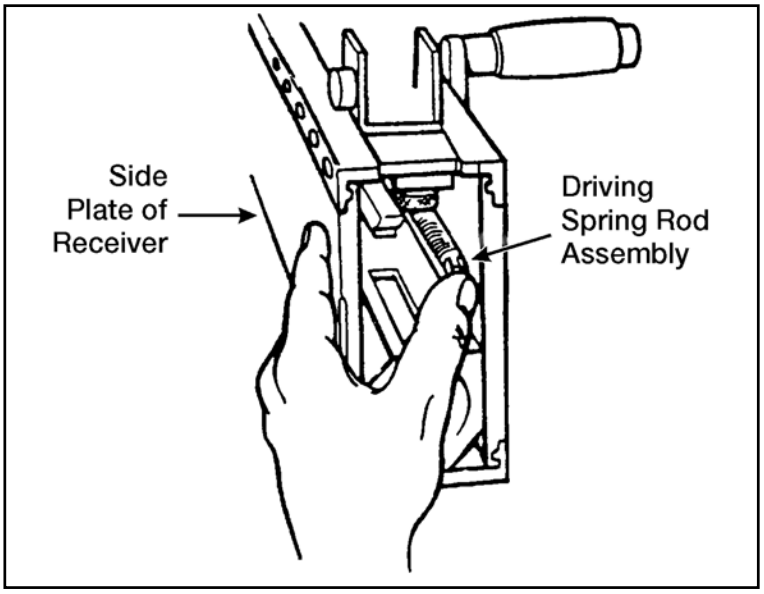

Figure 071-022-0001-41. Installation of the driving spring rod assembly

g. Install backplate assembly (figure 071-022-0001-42).

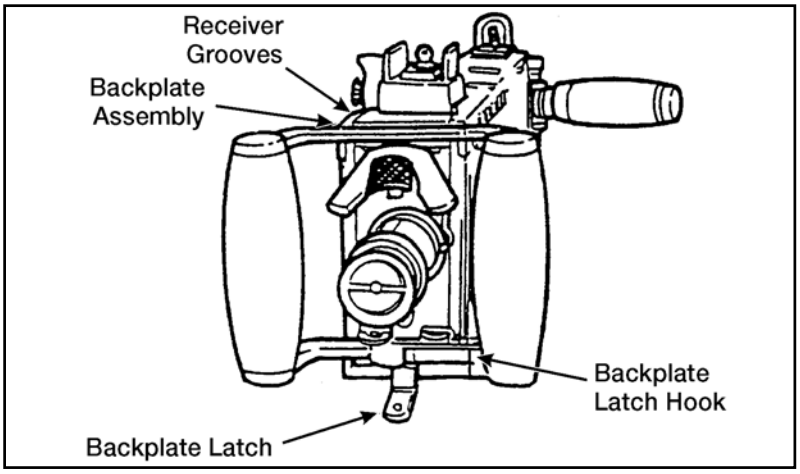

Figure 071-022-0001-42. Installation of the backplate assembly

(1) Align backplate assembly with receiver grooves. Pull backplate latch lock while lifting up on backplate latch. Lower backplate assembly down until engaged in receiver.

(2) Test proper locking by pulling up on backplate assembly.

h. Assemble barrel assembly.

(1) Retract bolt far enough for barrel locking spring lug to center in barrel locking spring hole on right side of receiver.

(2) Place the smallest loop of a caliber .50 link between the trunnion block and the barrel extension. This holds the barrel locking spring lug aligned with the 3/8-inch hole.

(3) Install and screw barrel assembly completely into receiver. Unscrew barrel assembly two clicks and check headspace.

7. Perform a function check to make sure weapon is assembled correctly.

a. Place the weapon in the single-shot mode.

b. Open the cover and pull the retracting slide handle to the rear. Bolt should lock to rear in single-shot mode.

c. Hold the retracting slide handle to the rear; depress bolt latch release and ease the bolt forward.

d. Press trigger; weapon should fire.

Performance Steps
e. Place the weapon in the automatic-fire mode.
f. Pull the retracting slide handle to the rear and hold. Bolt should not lock to rear in automatic-fire mode.
g. Release pressure on the retracting slide handle and ease the bolt forward.
h. Press trigger; weapon should fire.

Evaluation Preparation:

Setup: At the test site, provide the soldier with equipment listed in conditions. Use performance steps in the training outline to evaluate soldier's performance of the task.

Brief Soldier: Tell the soldier to clear, disassemble, clean, inspect, lubricate, assemble, and perform a function check on the weapon.

Performance Measures	GO	NO GO
1. Cleared the weapon.	____	____
2. Disassembled the weapon without damaging any parts.	____	____
3. Cleaned the weapon, components, and ammunition.	____	____
4. Identified any damaged, worn, or malfunctioning parts.	____	____
5. Lubricated weapon using the correct lubrication technique.	____	____
6. Assembled weapon in correct sequence without damaging any parts.	____	____
7. Performed a function check.	____	____

Evaluation Guidance: Score the soldier GO if all performance measures are passed. Score the soldier NO GO if any performance measure is failed. If the soldier scores NO GO, show him what was done wrong and how to do it correctly.

References

Required	Related
	FM 23-65
	TM 9-1005-213-10

071-022-0003
Load a Caliber .50 M2 Machine Gun

Conditions: Given a cleared caliber.50 machine gun, mounted on a tripod or cupola, and linked caliber.50 ammunition.

Standards: Loaded the linked ammunition in the feed tray groove so, when the cover was closed, a round remained in the tray groove and the ammunition fed correctly.

Performance Steps

1. Check to ensure weapon is clear.

2. Load ammunition.

a. Ensure the bolt is forward and the cover is closed.

b. Insert the double-loop end of the belt in the feed tray until the belt-holding pawl engages the first round.

c. With the palm of your hand facing up, pull the retracting slide handle to the rear and release it. (If the bolt latch release is up, return the retracting slide handle to the forward position then release the bolt.)

d. With the palm of your hand facing up, pull the retracting slide handle to the rear a second time and release it. When the bolt goes forward the second time, the gun is loaded.

e. To set the gun in automatic mode, lock the bolt-latch release down.

f. To set gun in single-shot mode, keep the bolt-latch release unlocked and in the up position. Release it manually for each round.

Evaluation Preparation:

Setup: Provide the soldier with equipment and materials listed in the conditions. Evaluate this task in a classroom or training area using dummy linked caliber.50 ammunition.

Brief Soldier: Tell the soldier to load the weapon using the belt of ammunition.

Performance Measures	GO	NO GO
1. Ensured the bolt was forward and the cover was closed.	____	____
2. Inserted the double-loop end of the belt into the feed way until the belt-holding pawl held the first round.	____	____

Performance Measures	GO	NO GO
3. Pulled the retracting slide handle to the rear and released it. If the bolt latch release was up, returned the retracting slide handle to the forward position, then released the bolt.	____	____
4. Pulled the retracting slide handle to the rear a second time and released it. When the bolt went forward the second time, the gun was loaded.	____	____

Evaluation Guidance: Score the soldier GO if all performance measures are passed. Score the soldier NO GO if any performance measure is failed. If the soldier scores NO GO, show him what was done wrong and how to do it correctly.

References

Required	Related
	FM 23-65
	TM 9-1005-213-10

071-022-0004

Unload a Caliber .50 M2 Machine Gun

Conditions: Given a caliber .50 M2 machine gun, mounted on a tripod or cupola, loaded with linked caliber .50 ammunition.

Standards: Removed all ammunition and links from the machine gun. Cleared the weapon, ensured the chamber was empty and the weapon was in the single-shot mode.

Performance Steps

1. Unload a cold weapon (less than 200 rounds have been fired from the weapon).

a. Keep gun oriented on target area.

b. Place the gun in the single-shot mode.

c. Raise the cover.

d. Lift the extractor away from the ammunition belt.

e. Remove the ammunition belt from the feed-way.

f. With palm up, pull the retracting slide handle to the rear to lock the bolt to the rear.

Performance Steps
g. Inspect the chamber and T-slot area to ensure they contain no ammunition, links, or brass.
h. Hold charging handle, release the bolt and allow the bolt to move slowly forward.
i. Close the cover.
2. Unload a hot weapon (more than 200 rounds have been fired from the weapon).
a. Keep gun oriented on target area.
b. Place the gun in the single-shot mode.
c. Fire the round that is in the chamber.
d. Raise the cover and remove the ammunition belt from the feed-way.
e. Press down on the bolt-latch release to allow the bolt to go forward and chamber the round in the T-slot.
f. Close the cover and fire the round.
g. Open the cover and inspect the chamber and T-slot area to ensure they contain no ammunition, links, or brass.
h. Hold charging handle, release the bolt and allow the bolt to move slowly forward.
i. Close the cover.

Evaluation Preparation:

Setup: Provide all equipment and materials listed in the task conditions. You can evaluate this task in a classroom or training area using dummy linked caliber .50 ammunition.

Brief Soldier: Tell the soldier to unload and clear the caliber .50 M2 machine gun.

Performance Measures	GO	NO GO
1. Placed the gun in the single-shot mode.	____	____
2. Raised the cover.	____	____
3. Removed the ammunition belt from the feed tray.	____	____
4. Closed the cover.	____	____
5. Pulled the bolt to the rear and locked it.	____	____
6. Raised cover and inspected to make sure there were no rounds in the chamber.	____	____

Performance Measures	GO	NO GO
7. Held charging handle and released the bolt, allowing it to move slowly forward.	____	____
8. Pressed the trigger.	____	____

Evaluation Guidance: Score the soldier GO if all performance measures are passed. Score the soldier NO GO if any performance measure is failed. If the soldier scores NO GO, show him what was done wrong and how to do it correctly.

References

Required	Related
	FM 23-65
	TM 9-1005-213-10

071-313-3454

Engage Targets with a Caliber .50 M2 Machine Gun

Conditions: Given a zeroed caliber .50 machine gun (tripod or cupola mounted), linked caliber .50 ammunition, and a sector of fire with engageable targets.

Standards: Fired the caliber .50 machine gun to engage targets in your assigned sector of fire. Applied the correct target-engagement techniques so the entire target was covered with fire.

Performance Steps
1. Assume a suitable firing position. Based on your situation, assume a firing position that will allow you to observe and engage targets, but reduce your exposure to enemy fire.
a. Prone position (figure 071-313-3454-1).

Performance Steps

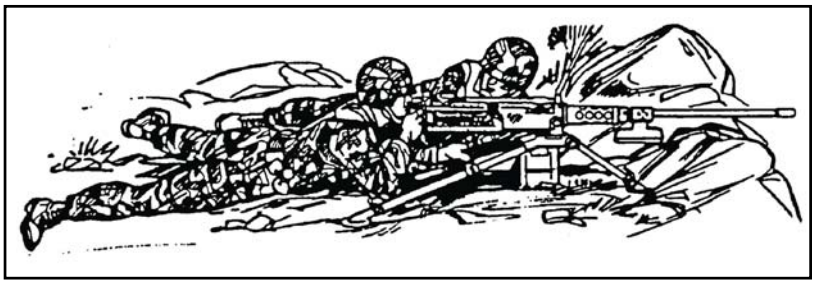

Figure 071-313-3454-1. Prone position (tripod mount)

b. Sitting position (figure 071-313-3454-2).

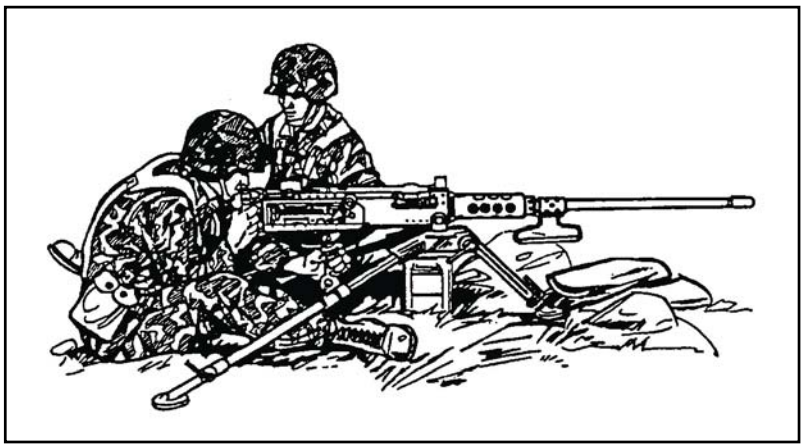

Figure 071-313-3454-2. Sitting position (tripod mount)

c. Standing position (figure 071-313-3454-3).

Performance Steps

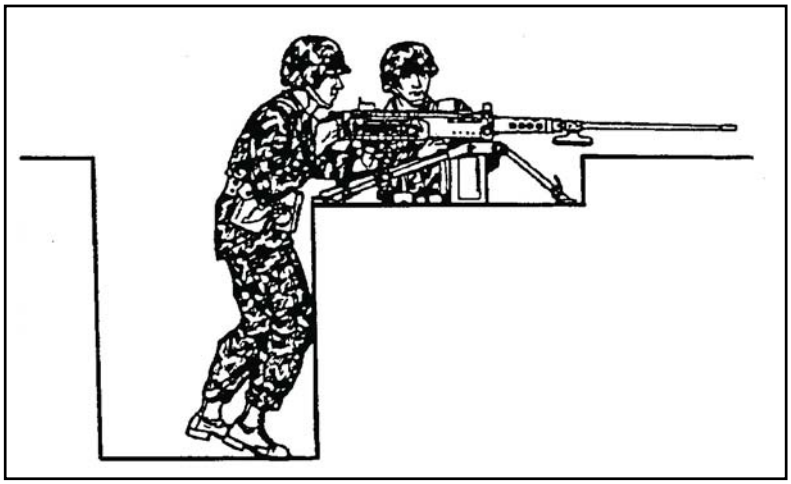

Figure 071-313-3454-3. Standing position (tripod mount)

d. Standing position for cupola-mounted gun (figure 071-313-3454-4).

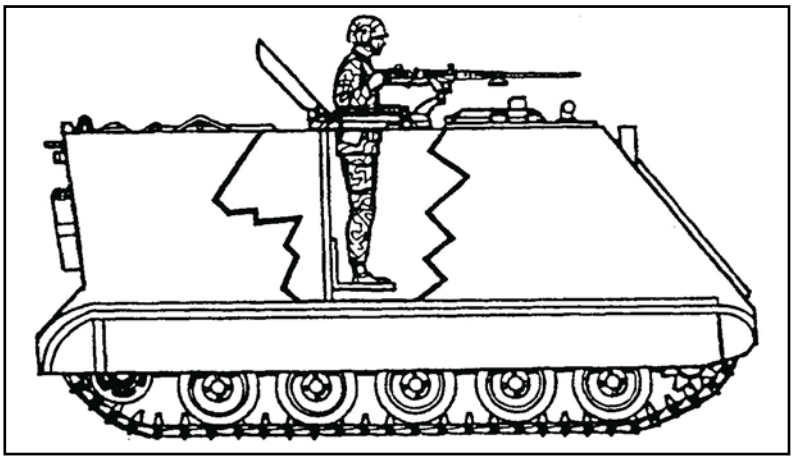

Figure 071-313-3454-4. Standing position (cupola mount)

e. Standing position for high-mobility, multipurpose wheeled vehicle (HMMWV)-mounted gun (figure 071-313-3454-5).

Performance Steps

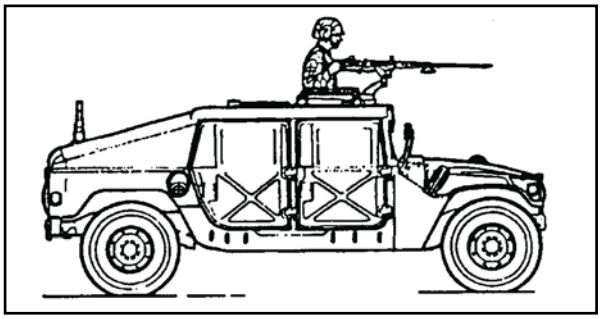

Figure 071-313-3454-5. Standing position (HMMWV mount)

2. Obtain the correct sight picture.

a. Sight alignment. Center the front sight post in the peep sight (figure 071-313-3454-6).

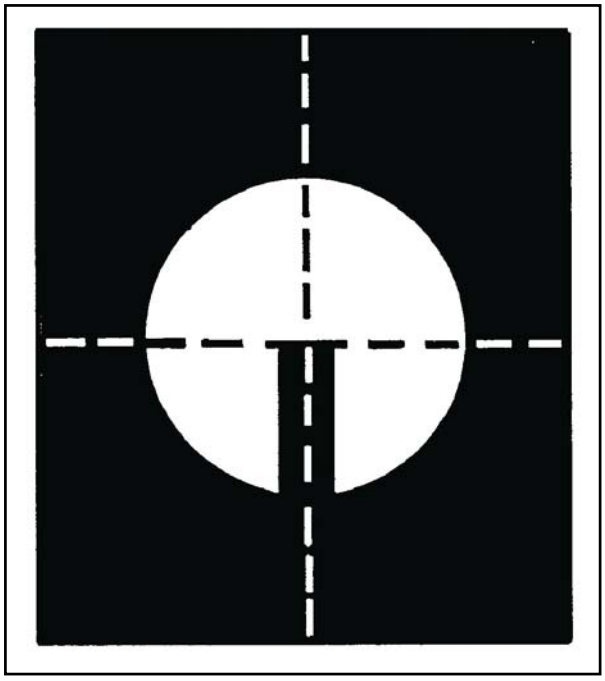

Figure 071-313-3454-6. Correct sight alignment

b. Sight picture. Place top center of front sight blade at bottom center of intended target (figure 071-313-3454-7).

Performance Steps

Figure 071-313-3454-7. Correct sight picture

3. Apply the correct engagement technique based on target type (figure 071-313-3454-8).

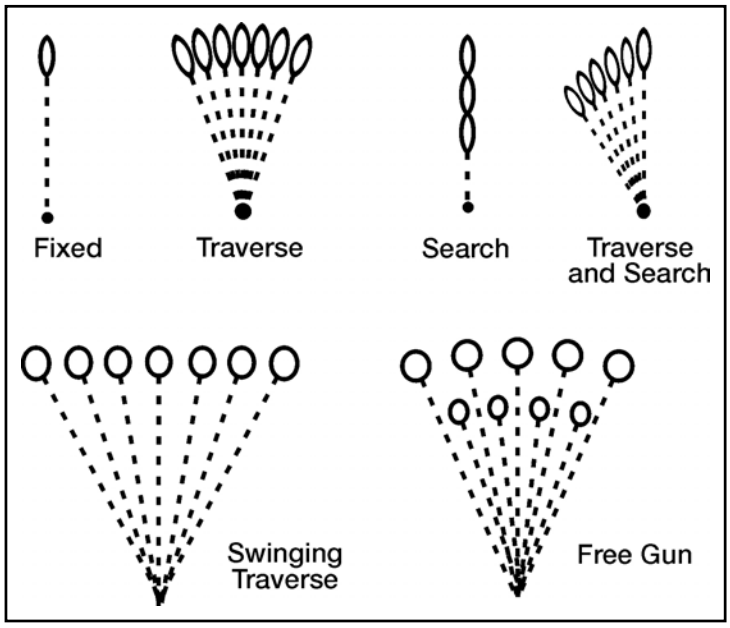

Figure 071-313-3454-8. Techniques of fire with respect to the gun

a. Use the correct gun manipulation technique.

(1) Fixed fire. Refers to fire delivered against a point target. Only one aiming point is necessary, with little or no manipulation of the gun.

(2) Traversing fire. Refers to fire distributed against a wide target, requiring successive changes in the gun direction. To distribute fire laterally, use the T&E mechanism to traverse the gun left or right.

(3) Searching fire. Refers to fire delivered against a deep target or a linear target with depth by successively changing elevation. To distribute fire in depth, use the T&E mechanism to move the muzzle of the weapon up or down.

(4) Traversing and searching fire. Refers to fire delivered in width and depth by successive changes in direction and elevation. Use this type of fire against a target whose long axis is oblique to the direction of fire.

(5) Swinging traverse. Refers to fire delivered against targets that require major changes in direction but little or no change in elevation. Loosen the traversing slide lock enough to swing the gun laterally.

(6) Free gun. Refers to fire delivered against moving targets that must be rapidly engaged with fast changes in direction and elevation. To fire free gun, remove the T&E mechanism.

b. Correctly apply fire to engage specific targets.

(1) Point target. Engage point targets with fixed fire using a single aiming point (figure 071-313-3454-9).

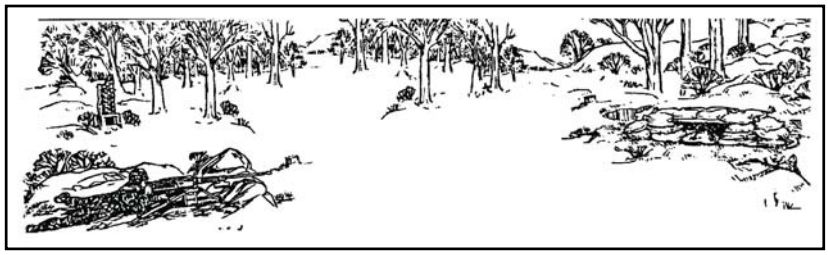

Figure 071-313-3454-9. Point target

(2) Linear target. Initially aim at the midpoint of the target. Traverse fire to one flank and then to the other to cover the entire target (figure 071-313-3454-10).

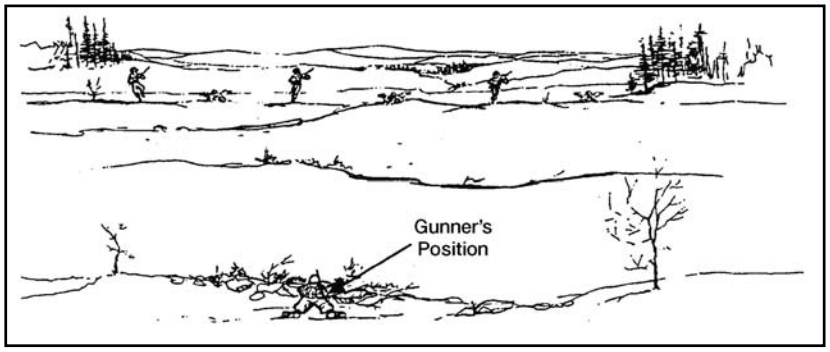

Figure 071-313-3454-10. Linear target and one gun

(3) Linear target with depth. Initially aim at the midpoint of the target, unless another portion of the target is more critical or presents a greater threat. Traverse and search to the flank closest to your position, then back to the other flank, so you cover the entire target (figure 071-313-3454-11).

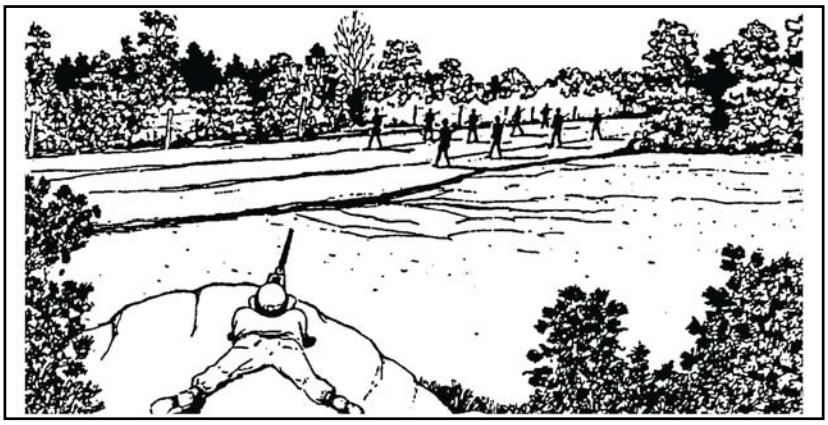

Figure 071-313-3454-11. Linear target with depth

(4) Deep target. Initially aim at the midpoint of the target, unless another portion of the target is more critical or presents a greater threat. Search down to the near end, then search up to the far end (figure 071-313-3454-12).

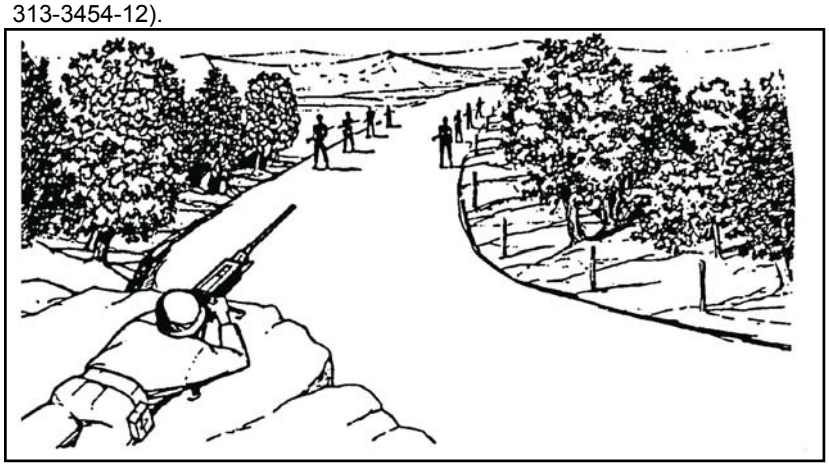

Figure 071-313-3454-12. Deep target

(5) Area target. Initially aim at midpoint of the target area. Traverse and search to either flank, then traverse and search to the opposite flank (figure 071-313-3454-13).

Performance Steps

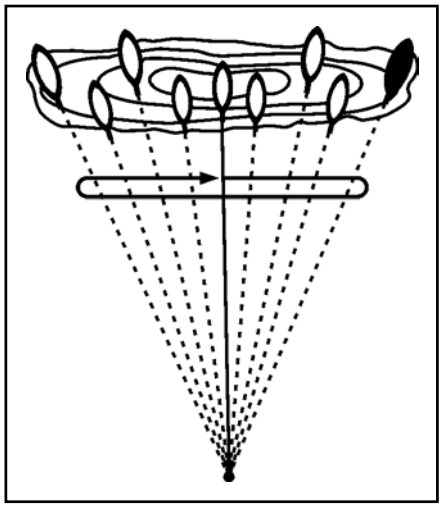

Figure 071-313-3454-13. Engagement of area targets

4. Observe fire and adjust the aiming point to place effective fire on the target.

a. Observation of fire. Observe bursts of fire by noting tracers in flight or the strike of the rounds in the target area.

b. Adjusted aiming point. Adjust fire quickly without adjusting the sight. If the initial burst misses the target, rapidly select a new aiming point the same distance from the center of impact of the initial burst but in the opposite direction. Fire a second burst (figure 071-313-3454-14).

Performance Steps

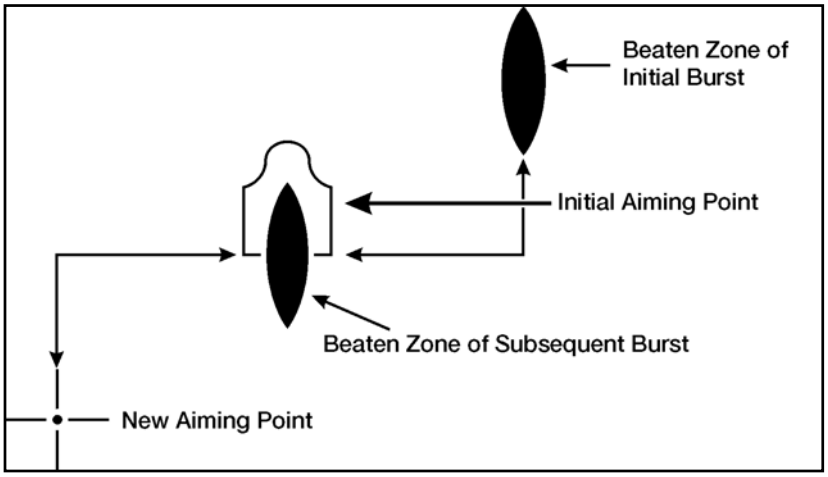

Figure 071-313-3454-14. Adjusted aiming point method

5. Fire on the targets until they are all destroyed, or until you receive an order to cease fire.

Evaluation Preparation:

Setup: Evaluate this task on a 10-meter live-fire range equipped with the basic machine gun target pasters (FSN 6920-078-5128). Provide the soldier with a caliber .50 M2 machine gun (tripod mounted) with 236 rounds of linked caliber .50 ammunition (117 rounds for practice and 119 rounds for qualification). Conduct 10-meter firing according to FM 23-65, appendix C, table I.

Brief Soldier: Tell the soldier he will fire table I according to FM 23-65, appendix C (brief the conditions, standards, and ammunition). Tell the soldier that, when you instruct him to fire, you will evaluate his ability to apply correct target engagement techniques and to place effective fire on targets.

Performance Measures	GO	NO GO
1. Assumed a suitable firing position.	____	____
2. Applied correct engagement technique based on target type.	____	____
a. Used correct gun manipulation technique.		
b. Used correct application of fire to engage specific targets.		

Performance Measures	GO	NO GO
3. Placed effective fire on targets (score a minimum of 84 points).	____	____

Evaluation Guidance: Score the soldier GO if all performance measures are passed. Score the soldier NO GO if any performance measure is failed. If the soldier scores NO GO, show him what was done wrong and how to do it correctly.

References

Required	Related
	FM 23-65
	TM 9-1005-213-10